

## SEQUENCE LISTING

<110> KOCHENDOERFER, GERD G.  
SHAO, HAIYAN  
CRESSMAN, SONYA

<120> MULTIPLEX POLYMER LIGATION

<130> GRFN-047WO

<140> Unassigned  
<141> filed herewith

<150> 60/437,511  
<151> 2002-12-30

<150> 60/515,609  
<151> 2003-10-29

<160> 2

<170> FastSEQ for Windows Version 4.0

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<213> Artificial Sequence

<220>  
<223> synthetic granulocyte stimulating protein

<221> VARIANT  
<222> (58)...(58)  
<223> Xaa = a non-native lysine chemically modified at  
the epsilon-amino group with an oxime linker group  
coupled to a designated water-soluble polymer  
through an oxime bond (or intermediates which  
contain AoA)

<221> VARIANT  
<222> (121)...(121)  
<223> Xaa = Nle (norleucine)

<221> VARIANT  
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<223> Xaa = Nle (norleucine)

<221> VARIANT  
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<223> Xaa = psi (non-native amino acid residue  
consisting of a cysteine that is  
carboxamidemethylated at the sulfhydryl group)

<221> VARIANT  
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<223> Xaa = a non-native lysine chemically modified at  
the epsilon-amino group with an oxime linker group  
coupled to a designated water-soluble polymer  
through an oxime bond (or intermediates which  
contain AoA)

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 Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys  
 1 5 10 15  
 Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln  
 20 25 30  
 Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val  
 35 40 45  
 Leu Leu Gly His Ser Leu Gly Ile Pro Xaa Ala Pro Leu Ser Ser Cys  
 50 55 60  
 Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser  
 65 70 75 80  
 Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser  
 85 90 95  
 Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp  
 100 105 110  
 Phe Ala Thr Thr Ile Trp Gln Gln Xaa Glu Glu Leu Gly Xaa Ala Pro  
 115 120 125  
 Ala Leu Xaa Pro Xaa Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe  
 130 135 140  
 Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe  
 145 150 155 160  
 Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro  
 165 170

<210> 2  
 <211> 174  
 <212> PRT  
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<220>  
 <223> synthetic granulocyte stimulating protein

<221> VARIANT  
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 <223> Xaa = Abu (Aminobutyric acid)

<221> VARIANT  
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 <223> Xaa = a non-native lysine chemically modified at  
 the epsilon-amino group with an oxime linker group  
 coupled to a designated water-soluble polymer  
 through an oxime bond (or intermediates which  
 contain AoA)

<221> VARIANT  
 <222> (121)...(121)  
 <223> Xaa = Nle (norleucine)

<221> VARIANT  
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 <223> Xaa = Nle (norleucine)

<221> VARIANT  
 <222> (131)...(131)  
 <223> Xaa = psi (non-native amino acid residue  
 consisting of a cysteine that is  
 carboxamidemethylated at the sulfhydryl group)

<221> VARIANT  
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 <223> Xaa = a non-native lysine chemically modified at

the epsilon-amino group with an oxime linker group coupled to a designated water-soluble polymer through an oxime bond (or intermediates which contain AoA)

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Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys
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Xaa Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
 20          25          30
Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val
 35          40          45
Leu Leu Gly His Ser Leu Gly Ile Pro Xaa Ala Pro Leu Ser Ser Cys
 50          55          60
Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser
 65          70          75          80
Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser
 85          90          95
Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp
 100          105          110
Phe Ala Thr Thr Ile Trp Gln Gln Xaa Glu Glu Leu Gly Xaa Ala Pro
 115          120          125
Ala Leu Xaa Pro Xaa Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe
 130          135          140
Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe
 145          150          155          160
Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
 165          170

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